Pressure-Based System and Method for Determining Cardiac Stroke Volume

ABSTRACT OF THE DISCLOSURE

Cardiac stroke volume (SV) of a subject is estimated as a function of a value derived from a measured arterial pressure waveform. The value may be the standard deviation, or a function of the difference between maximum and minimum pressure values, or a function of either the maximum value of the first time derivative or the absolute value of the minimum of the first time derivative of the pressure waveform, or both, or a function of the magnitude of one or more spectral components of the pressure waveform at a frequency corresponding to the heart rate. Cardiac output is then estimated as the product of the subject's heart rate and SV, scaled by a calibration constant. Arterial pressure may be measured invasively or non-invasively.